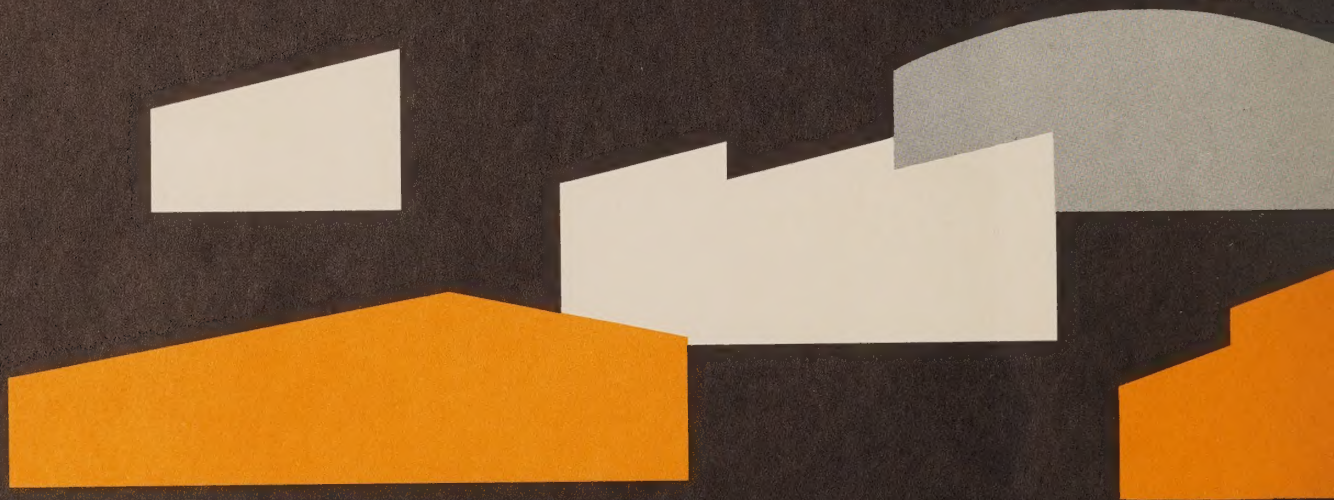


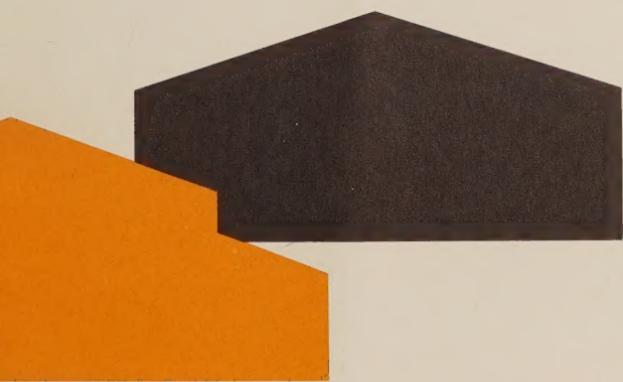
for permanent, low-cost, commercial-industrial buildings



**KOPPERS POLE-TYPE CONSTRUCTION**

what is your building **problem?**





**COSTS?**

Have soaring construction costs hampered your expansion plans?

**TEMPORARY SHELTER?**

Trying to struggle along with a temporary building?

**TIME FACTOR?**

Do you need more room *now*, rather than months from now?

**EXPENSIVE UPKEEP?**

Foresee high maintenance costs over the years ahead?

**LACK OF FLEXIBILITY?**

Afraid that present plans will cramp your future needs?

**TIME TO LOOK TO KOPPERS POLE-TYPE CONSTRUCTION!**

## Koppers pole buildings cut construction costs



Atlantic Aluminum & Supply Co., Inc., a Koppers "Qualified" Contractor, built this pole-type warehouse and distributor showroom in 1956. The attractive building measures 60' x 120', is 10 ft. high at the eaves and has a 30' clear span area.



The warmth and beauty of this office-showroom is visible evidence of how easily pole-type buildings can be "finished" to the decor of modern business.

As construction costs rose rocket high, many companies were forced to shelve plans for new buildings. But today, with no relief in sight, they have found that they can no longer delay their expansion programs without stifling their normal growth. What's the answer?

More and more, progressive companies are finding the answer is Koppers Pole-Type Construction. More and more Koppers Qualified contractors are showing businessmen, civic and educational leaders how to solve building problems. With Koppers Pole-Type Construction the contractor can offer his client all the benefits of sound, permanent construction, unmatched flexibility and speed of construction, plus this outstanding feature:

**WITH KOPPERS POLE-TYPE CONSTRUCTION YOU REDUCE COSTS 10, 20, SOMETIMES 50%.**

*How can pole buildings be first-rate and be so low cost?*

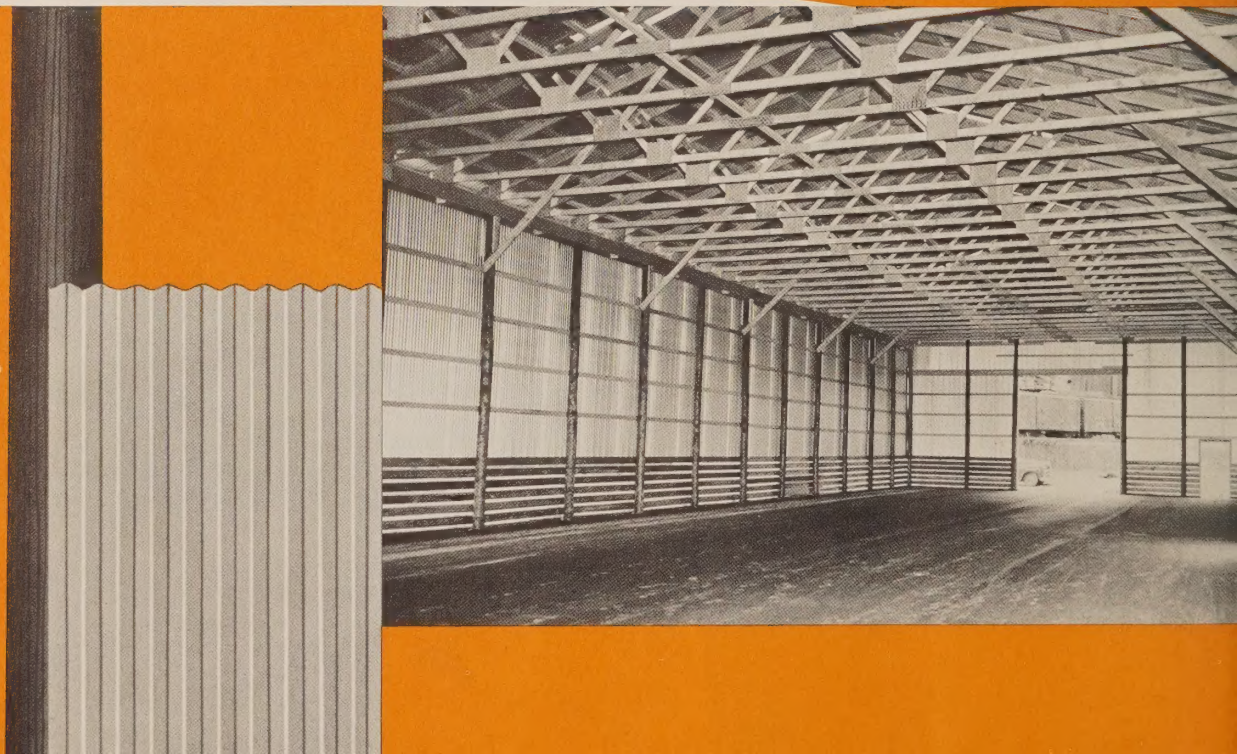
The answer is simple. With pole-type construction you do away with excessive erection time and expensive labor; costs are drastically reduced. The specific areas of cost savings on pole-type buildings include:

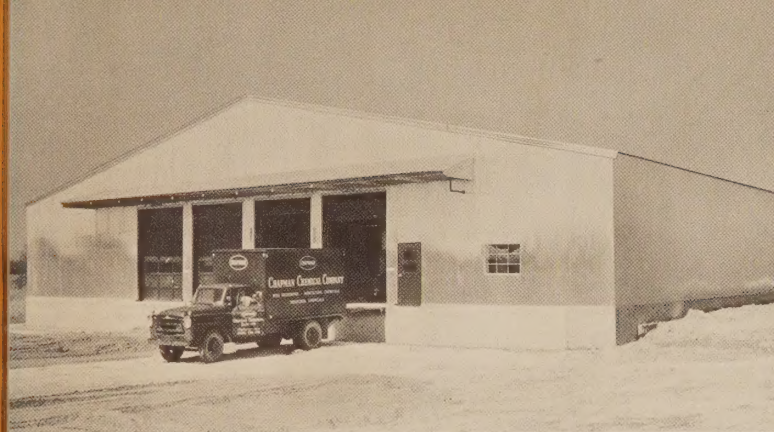
Grading . . . . .	Limited to leveling for building floor
Excavating . . . . .	Limited to digging pole holes
Foundation Work . . . . .	None required
Pre-Framing . . . . .	None required
On-The-Job Engineering . . . . .	None required
Erection Equipment . . . . .	Usually only light equipment needed

All of the other features of pole-type construction—sound engineering, competent erection, and quality materials—are the same as those found in conventional buildings.

## Koppers pole buildings are permanent

This clear span Motor Wheel Corporation warehouse was built by Thornton General Contractors for \$1.25 a sq. ft. Building is 40' x 128' and has two 16' x 16' doors and plastic skylights.





▲ Aluminum Products Co., a Koppers "Qualified" Contractor, put up this warehouse for Chapman Chemical Co., in Memphis, Tenn., for \$1.05 a sq. ft. excluding floor and retaining wall.

▼ Industrial and Farm Builders, Inc., a Koppers "Qualified" Contractor, erected this 45' x 132' school bus garage in Grafton, Ohio. Building cost \$2.50 a sq. ft. including insulation and concrete floor.



**WHAT MAKES A BUILDING PERMANENT?** Three things, generally: The materials that go into it, the basic design, and the way it is put together. Study carefully the life expectancy of the major components of a Koppers pole building.

**THE POLES.** Pressure treated with proven preservatives to give a life-time of service. The worth of properly treated poles has been proven by the service that utility companies all over the country have come to expect from them. In the 'thirties,' a well-treated pole was expected to last thirty years. Now, this estimate has risen to 45 or 50 years, since the anticipated failures *did not* occur. This length of service has been achieved under the most severe exposure conditions. Of course, the poles you use inside your building will be protected and so, in this case, even longer life can be expected.

**THE SIDING.** Take your choice: aluminum, galvanized steel, or treated wood—all react the same way on a pole type building as on any other. The extreme serviceability of these materials is, of course, well known.

**WHAT ABOUT THE DESIGN?** Standard architectural design methods are employed throughout. Specific requirements as to live loads (30 to 35 pounds are most commonly specified) can be met and proven by accepted formulae. Wind loads or horizontal loads are designed into individual buildings the same way. Usually 20 pounds is sufficient. If higher loads are required, they can be met.

**WHAT ABOUT THE ACTUAL ERECTION?** Koppers has built up a network of qualified contractors in key areas everywhere. They were chosen because their reputations were built on integrity and quality workmanship. Above all, they know their business and can be depended upon to do a thoroughly competent job.

**ADD ALL THESE FACTORS TOGETHER.** Long-life basic materials, sound engineering and design, and quality workmanship can add up to only one thing: *permanence*.

**KOPPERS POLE-TYPE CONSTRUCTION IS PERMANENT CONSTRUCTION!**



In preparation for the coming season, all new stables at Hinsdale Racetrack, Hinsdale, N. H., were quickly and inexpensively built on Koppers Poles supplied by National Fence Co., a Koppers "Qualified" Contractor.

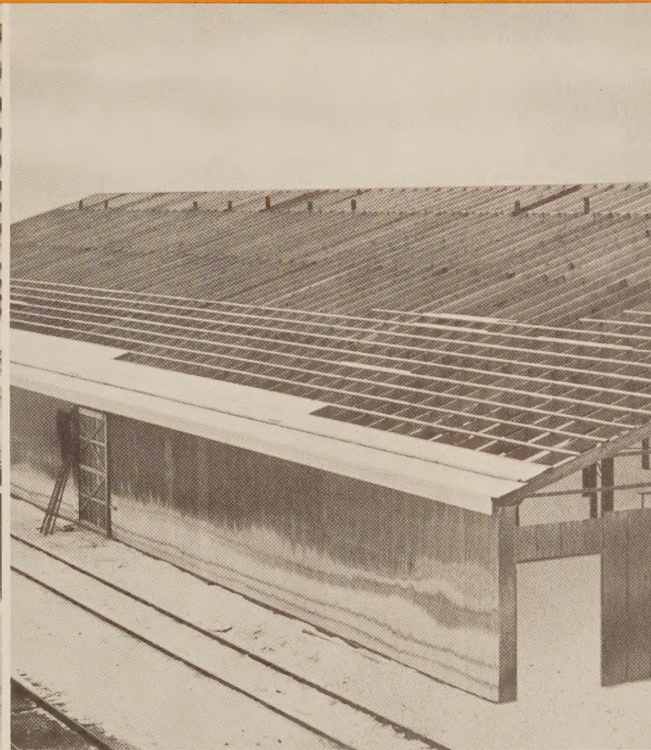
## Koppers pole buildings go up quickly

Many companies have an orderly plan for providing for future expansion, and much of this work can be scheduled months and even years ahead. But what happens when an emergency arises? Schedules are disrupted, plans fall apart.

Here's where Koppers Buildings fit in, perfectly! A low-cost, permanent Koppers pole-type Building can be ready for occupancy in a matter of days—or at most a few weeks—after you decide on your building plan. And planning, too, is quicker. Much of the costly, time-consuming engineering required for conventional structures can be handled by your Koppers Qualified Contractor, working in close conjunction with your own staff. Because of the simplicity of construction of pole-type buildings, your contractor can generally schedule his work more simply and accurately than the scheduling required for conventional construction. Pole-type construction is never delayed by material shortage.

Exclusive of floor and fill, this huge unheated 90' x 405' pole-type warehouse was put up for only \$1.64 a sq. ft. in Marquette, Michigan by Hackett Construction Company.

This 126' x 261' sq. ft. plastics warehouse in Lansing, Michigan has 14½' x 18' bays for efficient use of materials handling equipment. Cost—\$1.43 a sq. ft. excluding floor and sprinklers.



WHEN YOU NEED A NEW BUILDING FAST SEE A KOPPERS QUALIFIED CONTRACTOR

Koppers pole buildings are

Slick as a slalom—that's what skiers think of their new modern lodge built on Koppers poles at Greek Peak, New York. Featured in *PROGRESSIVE ARCHITECTURE*, this building suggests another design application of pole-type construction.



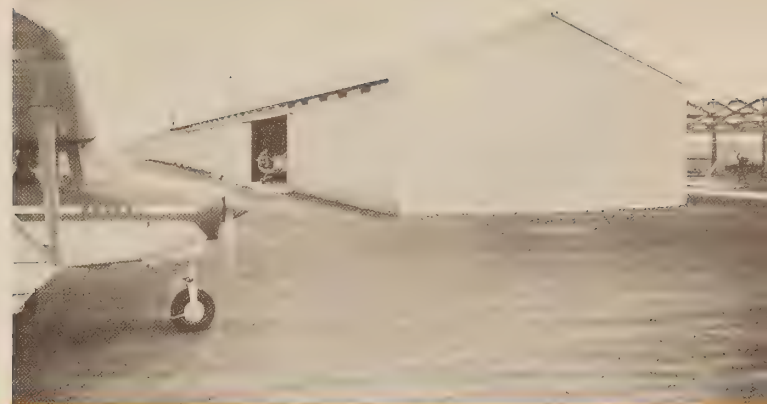
## flexible

Few commercial, institutional or business leaders today can tell with great precision exactly what their building requirements will be in the years ahead. Usually they are faced with the problems of making a decision between:

- (1) building to today's requirements and hoping that it's adequate for a few years, or
- (2) over-building today, at the expense of tying up capital, in anticipation of the needs of the future. Neither of these costly compromises is necessary with flexible Koppers pole-type buildings.

Permanent, low-cost pole-type buildings are different from ordinary structures in that the poles support the entire structure. Consequently, when an addition to a pole building is desired, it's simply a matter of removing the siding and attaching the addition. You can build to meet your present requirements and add on only as needed. There's no re-building from the ground up, no need to overbuild *today* because of what may happen *tomorrow*.

Pole construction is a challenge to architects and engineers; it inspires a wide variety of shapes and forms. One example of creative pole design is the modern ski lodge shown on the opposite page.



Grain Valley Airport, Grain Valley, Mo., has three pole-type hangars—two 30' x 40' and one 30' x 300'. All were designed for 36" snow load and 100 mph wind. Cost only \$1.63 a sq. ft.

Koppers pole buildings are ideal for retail outlets. This 36' x 75' clear span garden supply store meets present needs, yet can be easily expanded if necessary.



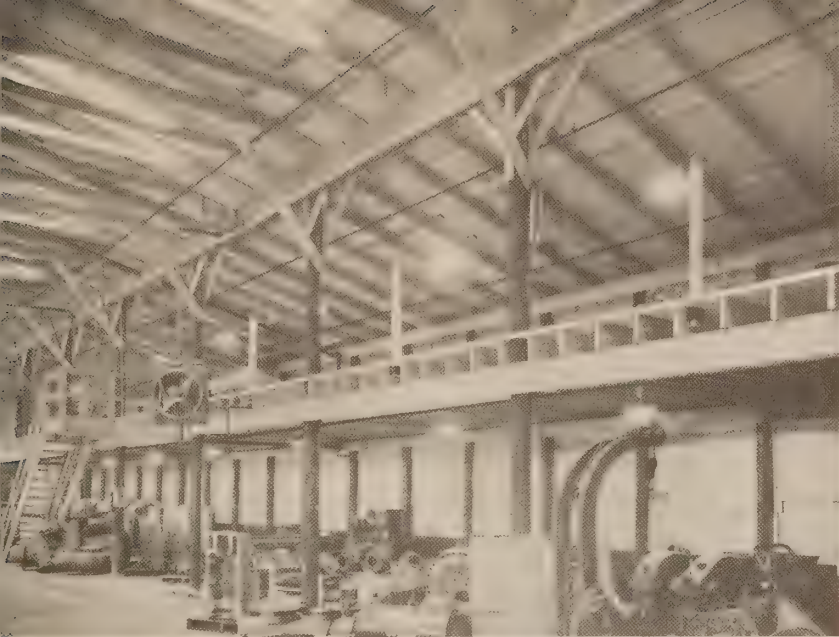
BUILD FOR TODAY'S NEEDS—AND PREPARE FOR TOMORROW'S WITH KOPPERS POLE-TYPE CONSTRUCTION



This sturdy-looking 54,000 sq. ft. chemicals warehouse was built for only \$2.65 a sq. ft. It has a plywood built-up roof, a concrete floor, a sprinkler system and rests on Koppers pressure-treated poles.

Koppers pole buildings eliminate





Lisbon Lumber Company, a Koppers "Qualified" Contractor, put up this clear span 56' x 234' pole building for the Elliot Company, Jeannette, Pa. in seven weeks. Cost including floor was \$2.95 a sq. ft.



Pole buildings are ideal for light manufacturing operations. Insulation, heating and a concrete floor were included in the \$3.00 a sq. ft. cost of this 40' and 55' x 450' building owned by Blue Ridge Veneer and Plywood Corp., Waynesboro, Virginia.

## high annual maintenance

Maintenance costs are always a factor in the long-term planning of any type of building. The pole-type building is an outstanding example of construction that remains structurally sound for generations. Its strength and durability are derived from the strength and durability of its supporting members—Koppers Pressure-Treated Poles—since they alone bear the weight of the building.

Koppers Poles and lumber will remain sound over long periods during which metals will corrode and concrete crack, crumble and settle. They withstand wind and rugged weather. A fact-finding team of engineers examined pole-type buildings which stood in the path of Hurricane Hazel recently and found no evidence of damage. Absence of maintenance and replacement expense over the years is an important factor to consider when a new building is being planned.

WITH KOPPERS POLE-TYPE CONSTRUCTION FUTURE DOLLARS GO INTO THE BUSINESS NOT THE BUILDING

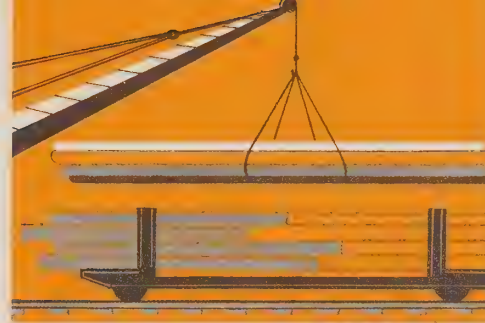
## This is Koppers pole-type construction

Pole-type construction is one of the simplest, most satisfactory basic types of construction ever devised. Poles are set directly in the ground and the rest of the building is "wrapped-around" this basic framework.

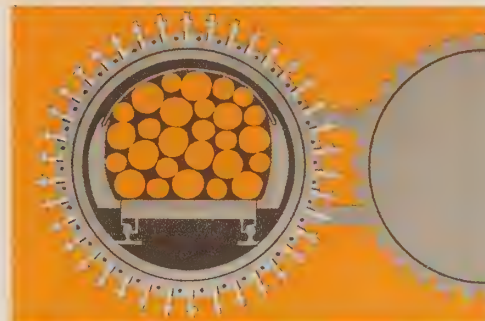
One of the major advantages of pole construction is the opportunity it provides to use wood and its high tensile strength, resilience and ease of handling—for interior support members, trusses, arches, etc. Also, pole-type construction is completely flexible—allowing for a wide variety of "finish" materials—plastic skylights, metal or wood siding, tar roofs,

Taxpayers' money was saved on this 144' x 176' bus garage and service center in Battle Creek, Mich. Erection costs of \$1.94 a sq. ft. included 11 overhead doors, 22 skylights, aluminum roofing and siding, an asphalt floor and Koppers Poles.

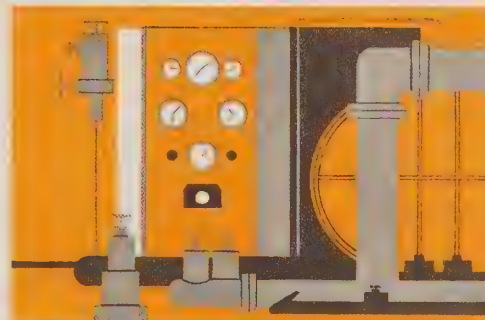




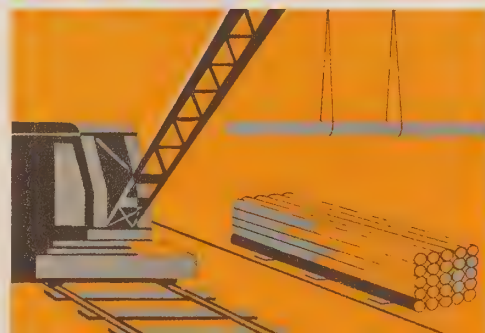
Cranes load straight, well-seasoned poles on tram cars for pressure treatment . . .



in high steel cylinders built to withstand high pressures which are applied . . .



in a controlled process that assures deep retention and penetration of preservative, and . . .



a supply of quality poles from strategically located plants and yards across the land.

etc. But the big difference in pole-type construction is the *permanence* of the load-bearing poles . . . because of pressure-preservation with chemicals that prevent decay and termite attack. The story behind pressure-treated poles is shown on the right.

#### PRESSURE-TREATMENT

#### MAKES THE DIFFERENCE

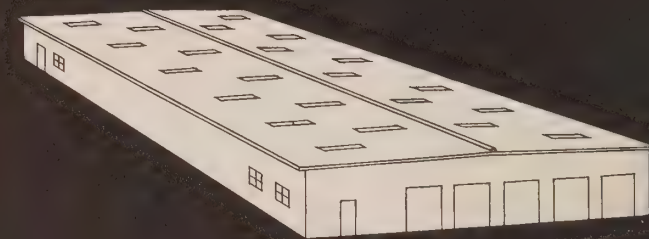
Pole buildings are permanent because each pole has been protected from the ravages of decay and termites through pressure-treatment. The first step in the treating process is the procurement of straight, strong trees from Koppers vast timber holdings. After cutting, the "poles" are promptly shipped to treating plants. Here they are peeled and sprayed with a fungicide to inhibit decay organisms from getting a start during the seasoning process.

Properly seasoned poles are loaded on tram cars and pushed into large treating cylinders. Then, under the scientific control of treating supervisors, the charge of poles is pressure-impregnated with a preservative. After the treating cycle is completed, the poles are removed from the cylinder and stored at plants or yards for prompt shipment to contractors.

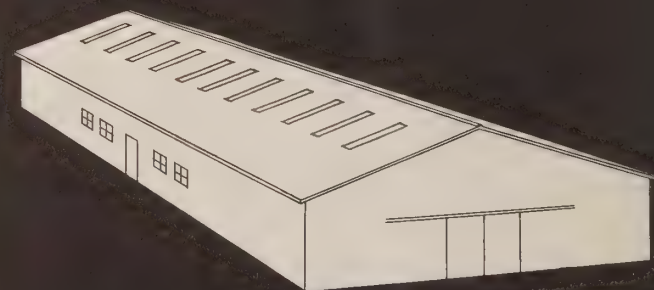
These are Koppers pole-type buildings — choose



DeGarmo Construction Company, a Koppers "Qualified" Contractor erected this 30' x 75' RCA machine storage building in Hightstown, New Jersey, for \$2.78 a sq. ft. excluding lighting and heating.

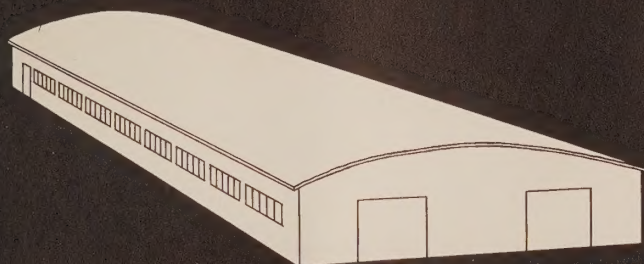


FLAT ROOF

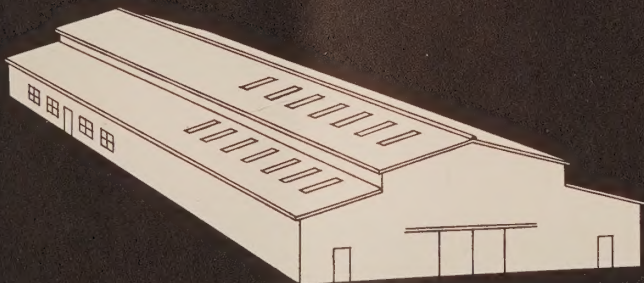


GABLE ROOF

the building type you need!



HANGAR-TYPE ROOF



MONITOR ROOF

Like any other soundly-engineered building, Koppers pole-type structures will vary in economy in proportion to the advantage you and your contractor take of the basic design techniques.

For unapproachable economy, you get the most from your building dollar when you use one of the basic designs shown here. Substantial cost savings are realized with any type of pole-building, but structures using interior poles are generally the most economical. In this class are flat and gable roofed structures.

In almost the same money-saving category, are hangar-type and gable roofs with *clear spans* up to 40 feet wide. Longer spans can be achieved, however, costs increase as spans lengthen.

**FLAT ROOFS**—Buildings with interior poles with usually less than a 1" rise in 12" horizontal. Bay sizes are flexible to satisfy local conditions. Flat roofed buildings 200 feet wide and 400 feet long have been designed.

**GABLE ROOFS**—Narrower buildings with interior poles. Roof has a steep rise. Forty feet is usually maximum width. However, with interior poles, widths up to eighty feet are permitted if there is no unusual eave height restriction.

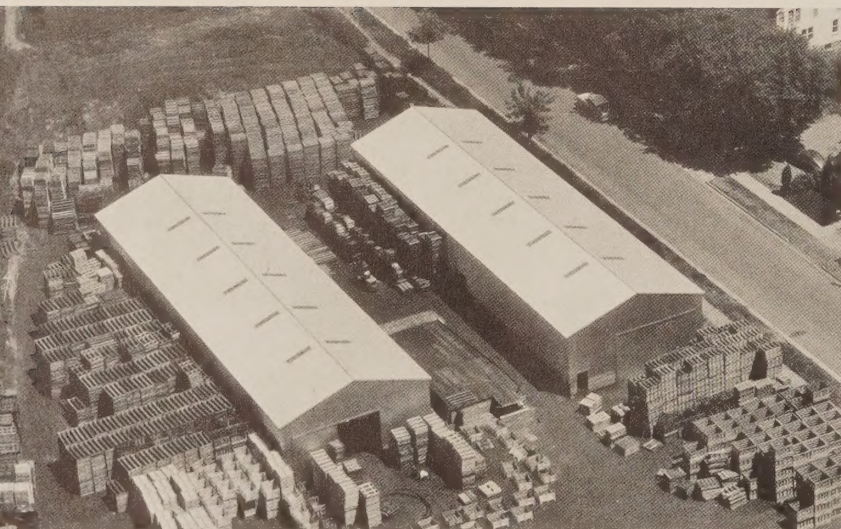
**HANGAR-TYPE**—In same price range as gable-types using truss construction. Again, 40' widths are best. Because of use of bowstring or tied arches, hangar-roofed buildings do not offer the maximum economy found in flat roofed structures. Prices automatically rise as spans increase and require truss rafter construction, but there are still major cost savings over other types of construction.

**MONITOR**—Using interior poles, monitor-roofed buildings are similar in economy to gable-roofed structures having interior poles. This form of pole construction is especially useful where a high center or drive-through area is important to final use.

For pole-building information

see your Koppers

qualified contractor



Koppers poles and splashboard lumber plus top quality siding and roofing were used for these permanent warehouse facilities built recently in Michigan.

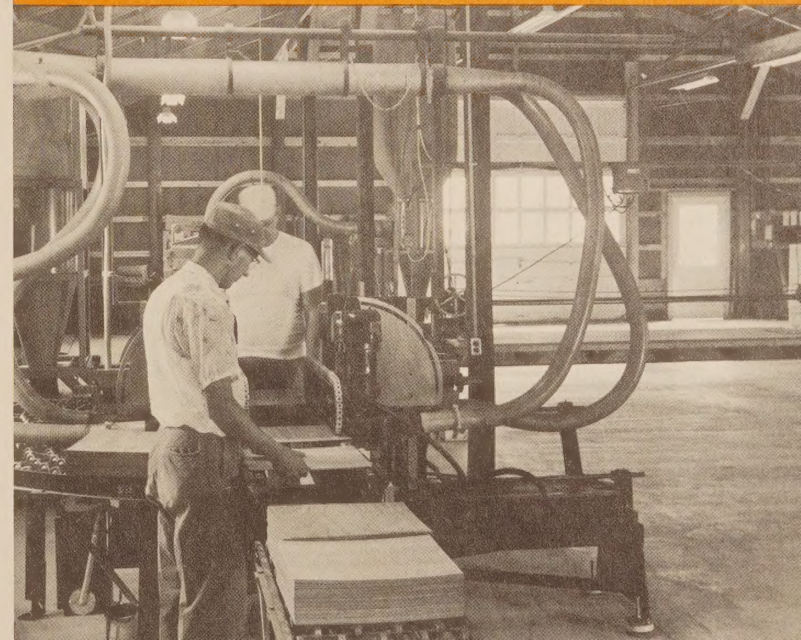
Progressive contractors are now erecting Koppers Pole Buildings for clients, large and small, who are interested in top-quality construction at rock bottom cost. These contractors are Koppers "Qualified." They can be depended on to perform their contract to their client's satisfaction—one of the prerequisites needed before they become a Koppers Qualified Contractor. In situations where special problems may arise, Koppers Qualified Contractors can call on the services of Koppers headquarters staff of engineers for additional assistance. Because of their know-how in pole construction and their use of Koppers design, a Koppers Qualified Contractor is your guarantee of a building engineered and built for permanence.

Bow-string trusses give clear-span to the 60' x 70' storage warehouse of Tibbitts Distributing Co., Greenville, Michigan. Trusses were used to match an attached concrete block structure built earlier. Cost of the building—\$3.30 a sq. ft.



Perfect answer to expansion and storage problem is this 60' x 135' pole building erected for Mahoney Sash and Door Co., Youngstown, Ohio, by Lisbon Lumber Company.

National Lumber and Veneer Co., Seymour, Ind. owns this 50' x 150' manufacturing building. Structure cost \$2.75 a sq. ft. including lighting, heating, insulation, and concrete floor.



**KOPPERS COMPANY, INC.**

**WOOD PRESERVING DIVISION**

**Pittsburgh 19, Pennsylvania**

**ATLANTIC ALUMINUM & STEEL COMPANY, INC.**

**STAUNTON**

**ALEXANDRIA**

**VIRGINIA**

